No. 278. Vol. VIII.

PHILADELPHIA MEDICAL TIMES.

A BI-WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

EDITED BY HORATIO C. WOOD, M.D.

FEB 20 18

JULY 20, 1878.

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TERMS.—Yearly Subscription, $4.00, in advance. Single Number, 20 Cents.

J. B. LIPPINCOTT & CO., Publishers,

715 and 717 Market St., Philadelphia.

LONDON: 16 SOUTHAMPTON ST., COVENT GARDEN.

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By WILLIAM PEPPER, M.D.,

Professor of Clinical Medicine in the University of Pennsylvania.

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ORIGINAL LECTURES.

CLINICAL LECTURE

ON ASPIRATION IN COMPLICATED CASES OF PLEURAL EFFUSION.

Delivered at the University Hospital

BY WILLIAM PEPPER, M.D.,

Professor of Clinical Medicine in the University of Pennsylvania Medical School.

(Reported for the *Philadelphia Medical Times.*)

THE first case is that of W. M., a cabinet-maker, who had always been strong and healthy (weighing one hundred and sixty pounds) until January 1 of last year, when he had a sudden attack of fever in the night, which confined him to bed for some time. When he at length got out of bed he found himself very short-winded. Soon afterwards he began to notice a tender spot situated at about the end of his breast-bone. He supposed at the time that this was caused by pressing the head of his brace and bits against his chest in boring, etc. He blistered the spot, and six weeks later it pointed, was opened with a lance, and discharged pus quite freely, and has continued to do so. From that time on the patient began to lose flesh; now he only weighs one hundred and fifteen pounds. Four weeks after the abscess opened, his feet and hands began to swell, and they have remained swollen ever since. You notice how distinctly the ends of the man's fingers are clubbed. The veins of his abdomen are large and tortuous. He has, however, had no cough until quite recently, the early part of April. Upon closely questioning the man, I find that he knows of no exposure and of no injury received at the time of the first attack. He has now been suffering pain for the past sixteen months. In addition to the local trouble he complains of pain about the shoulders and under the arm. There is no loss of power in his right arm, but it is stiff about the shoulder. Soon after the opening of the first abscess another formed, which was lanced last summer. I will now proceed to make a careful physical examination of the patient.

Over all the anterior part of the right lung there are good resonance and good respiratory murmur. The same is true posteriorly. Upon examining the left lung posteriorly, I obtain full, clear, pulmonary resonance and vesicular murmur. As soon, however, as on coming forward I get into the axillary region, I elicit perfect flatness from top to bottom of the axilla. Over the anterior part of the left lung there is also perfect flatness right up to the clavicle, and down towards the lower part of the chest, where I get the resonance of the distended stomach. There is also marked distention with absolute immobility of the anterior part of the left chest. The respiratory sounds are entirely absent over the dull area, and the vocal fremitus and resonance are also almost entirely absent.

The two fistulous openings, one on either side of the xiphoid cartilage, still discharge pus. It is not possible to pass a probe from one into the other, or from either into the cavity of the thorax. The probe can be introduced inwards, upwards, and to the left for a comparatively short distance, when the track becomes sinuous and cannot be followed. There is a distinct pulsation in the fifth interspace, in the position of the apex-beat of the heart.

There is evidently something which distends the chest and presses the lung back. The dulness of the left side is prolonged slightly beyond the right border of the sternum. This something which has pressed back the lung is evidently not free to move, as change of position makes no change in the area of dulness. Is the tumor solid, or liquid? Solid tumors are not rare in the chest. But a few hours ago I removed from a dead person a twelve- or fifteen-pound cancerous mass from the right chest. We might have something of the same sort here springing from the glands of the mediastinum, or, again, there might exist in this man a large aneurism implicating the anterior and inferior portions of the arch of the aorta.

It is certainly not an aneurism. The position would be a very rare one, and furthermore I can only detect a very feeble pulsation, and that is from the heart. There is no aneurismal bruit to be heard. Again, the disease did not come on slowly, as would be the case with an aneurism, but at night and in the shape of an acute attack of fever.

Unfortunately, we cannot exclude the possibility of a solid growth on account

of its comparative rarity in such a place. The strongest points against the existence of such a solid tumor are the acuteness of the trouble, the absence of any secondary growths, the absence of any signs of pressure upon the trachea or bronchus, and the development of two centres of suppuration. I do not think it is a solid mass.

Can it be a pleural effusion? If so, it presents some very unusual features. In the first place, no connection can be traced between the fistulæ and the pleural sac. The amount, too, of pus discharged is very small. It is exceedingly rare for an empyema to discharge at the xiphoid cartilage. Much more frequently it discharges at or about the nipple. The absence of cough and expectoration for sixteen months is also unusual. I have already noted the fact that there is a visible impulse at the normal seat of the apex, but, as we cannot absolutely determine the question whether this formation is solid or liquid, I am reduced to the necessity of making an exploratory puncture. I shall first freeze the part, and then introduce a very small needle. In so doing I shall give the heart a very wide berth.

The best way to make an exploratory incision is to connect a capillary needle with a very strong vacuum. Insert the needle under the tissue, and then turn on the suction so that you may get immediate warning in case you reach liquid of any kind. (The spot chosen was frozen, and a needle inserted as above directed.) You will observe that at first the needle meets with resistance, such as could be caused by a solid tumor or by great thickening of the pleura, and I get no liquid; but let me push the needle a little farther. Yes; here drops of thick pus fall into the receiver, and at once settle the disputed point. There is evidently a large circumscribed collection of pus in the left chest. The heart is displaced to the right. What appeared to be the apex-beat on the left is the impulse of the heart transmitted through the pus. The real apex-beat of the heart is probably just to the right of and above the epigastrium. In some rare cases of circumscribed empyema, the transmitted pulsation from the heart or the aorta may closely simulate an aneurism.

Usually, where there is a collection of purulent fluid in the chest, it finds its way out at about the position of the nipple, the liquid, according to the law of least resistance, finding egress where the least resistance is offered,—where the ribs are most widely separated and the intercostal spaces are weakest. Thus, in the present case I have no doubt that the pleura has been perforated pretty high up, and that the pus after getting into the thoracic walls has burrowed all the way down to the xiphoid cartilage. This is the reason why I could not discover by the probe the path which had been followed by the pus.

In connection with this empyema there might be caries of the sternal bone in front and behind; but this is not the case, I should think, for in such an event the abscess would be limited by the mediastinum, or if it had burst into the left pleural sac there would be a sudden and serious train of symptoms.

I want to call your attention to some effects which have followed the prolonged interference with the man's respiration. (These effects are more marked on the left than on the right side.) The cutaneous veins are greatly distended. The intercostal spaces are level, but there is a distinct bulging of the upper ribs on the left side. There also seems to be an enlargement of the lower end of the ulna and radius, and a remarkable degree of clubbing of the finger-ends. This latter change is not characteristic of any one form of chest trouble, but is generally present where there is chronic venous congestion and interference with the aeration of the blood. We constantly see this clubbing in aneurism, cyanosis, phthisis, and chronic pleurisy.

So long as this fluid is allowed to remain *in situ*, the patient will be worn down by hectic. I have, therefore, while talking to you been engaged in drawing it off, and have removed about two quarts through a moderate-sized canula, introduced at the same point where I first introduced the exploring needle.

Will this operation effect a cure? I do not know about this, but it certainly cannot do any harm: it certainly cannot make the man any worse than he is. It will not, indeed, prevent the formation of new matter in the cavity, for as a general thing new matter always forms after the first aspiration, but usually only in small quantities.

What will be the subsequent treatment? I will close up the opening and put the patient to bed. If by good fortune the

fluid does not collect again, all will be well; but, if it does collect, I shall again perform aspiration. If the quantity is as great the second time as the first, I shall introduce a drainage-tube.

(The fluid collected again in large quantities, and was again withdrawn, and a drainage-tube introduced. After the introduction of the tube the patient improved rapidly, and was soon well enough to go home. On July 1 the drainage-tube was removed, all discharge having ceased. He has gained sixteen pounds; is quite strong; eats well; has no cough, no pain. The physical signs indicate rapid expansion of the left lung.)

The above case was a successful instance of aspiration. Here is one where the very opposite will, I fear, be the result:

The patient is a medical student, aged 33. There has been no history of phthisis in his family: he is, in fact, the only member of it who is at all delicate. He has never had any cough to speak of until within the past year or so. He was perfectly well until February, 1877, when he had a fall on the ice, bruising his right side badly. Ever since then he has felt pain at the spot of injury upon taking a deep inspiration. From April last until now he has had a constant cough. His flesh failed considerably during the summer. There has been occasional sharp pain in his right side. Consequent upon some exposure his symptoms became suddenly worse. The cough grew more severe; he complained of great shortness of breath and of sharp pain in the left side. He was immediately thereupon admitted to the wards. This was early last fall. Upon close examination I found his right chest well shaped, movement free, and resonance good from top to bottom, in front and behind. There was also good respiratory murmur. Upon percussing the left chest, however, I found complete dulness both in front and behind. Both respiratory murmur and vocal fremitus were absent. The heart was so pushed from its natural position that the apex-beat was felt most distinctly at the site of the right nipple. There had evidently been a pleural effusion. The question then arose, Was it simple pleurisy, or was there some specific cause for the effusion? The patient was put to bed, and treated medicinally with digitalis, iodide of potassium, and blisters over the seat of the effusion. His diet was nourishing and sustaining, and cod-liver oil was administered in full doses. As a result of these measures, the level of the effusion began to fall, until it had reached the line of the second interspace, and still farther until it had reached the level of the fourth rib. This decrease in the quantity of the effusion made the prognosis appear very favorable, and the case might have been regarded merely as one of simple pleurisy which tended to spontaneous recovery. But still the heart was pushed out of position. Careful percussion showed also that the resonance at the left apex was too hollow and tympanitic to be regarded as the "pseudo-tympany" so often found over healthy lung-tissue when the chest is partly filled with liquid effusion; and, moreover, no respiratory murmur could as yet be distinguished there, but in its place was heard distant amphoric resonance, with now and then a metallic, tinkling sound. When the patient was quickly moved, I could hear a sudden metallic splashing sound. The serum of the effusion was evidently being replaced by gas, making the case one of hydro-pneumothorax. The lung was unable to expand when the effusion had fallen. There had been a perforation of the pleura, and air had escaped into the pleural sac. I was very much afraid that the effused liquid might become puriform in character. The pulse was frequent; the temperature ran as high as 102°; there was distinct hectic fever, with a marked disposition to night-sweats.

Still later, I again brought the man before the class. It was still impossible to say whether or not the effusion was purulent, since the organic disease of the lung would fully account for the hectic fever. The patient had greatly improved, and was able to walk about; but the effusion was again on the rise. The view I had expressed as to the pathology and nature of the case seemed still further confirmed. There had been at first small subpleural centres of catarrhal pneumonia; one of these, in softening, had caused perforation of the pleura, and allowed the escape of air and irritating pus into the pleural sac.

My treatment of the case at that time was purely expectant. I tried vigorously at first to get rid of the effusion, but when I found that the pneumothorax was increasing I ceased the use of depletives. As there was evidently some organic dis-

case of the lungs at the root of the trouble, I tried to cure that condition first. I did not then tap the chest. Drawing off the effusion would only have created a huge pneumothorax, which in turn would have excited further inflammation, and one of the first results would have been a chest-full of pus. It is impossible to make the lung expand when compressed by a liquid effusion. I believed, too, that uniform compression was the very best preventive of the slowly progressing organic disease. I did not care to have the fluid disappear until the chest was ready to contract and the lung to expand. So I did not withdraw the effusion. I directed my attention solely to the building up of the man's system. His hygiene was carefully looked after. He had good food and plenty of it. As I believe in honest dealing with patients, telling them, as a general thing, the whole truth about their disease, I told this patient that while auscultating the back of his right chest, I heard some crackling râles directly over the spine of the right scapula, and therefore had reason to fear the existence of some spots of catarrhal phthisis in the right upper lobe.

March 15.—The patient was again brought before the class, after remaining in the wards all winter. On the last occasion that I spoke to you of this case, I stated that I had for the time determined not to perform aspiration, as I feared disease of the lung-substance. I was afraid that if I drew off the fluid it would only turn the hydrothorax into a pneumothorax. Moreover, I wished to try the effect of the constant pressure caused by the effusion upon the catarrhal disease. Lastly, the patient was doing so well as he was that I did not wish to make any change.

But later there was some slight increase in febrile action, and although the right lung was doing very well he suddenly began to expectorate purulent matter. This attack of expectoration came on at night. The two following days he expectorated as much as a half-pint in twenty-four hours. The quantity then gradually ran down to a gill a day. Where did the expectorated matter come from? From the effusion, or from softening of the lung-structure? Coincidently with this attack the level of the effusion fell one inch. The matter must have come from the effusion, and the effusion must, therefore, have been purulent. Under these circumstances I thought it best to make an exploratory puncture. After applying ice, the needle was introduced, and my fears proved only too true: the effusion was an empyema. I covered up the opening, and sent the man back to the ward.

April 9.—There has been no change in the phenomena. The man has been getting out of patience, and has insisted upon it that I should aspirate him and draw off all the fluid. Somewhat against my better judgment, I have yielded to his constant importunities, and have already drawn off a pint of thick pus. To-day I shall draw off another pint; and I shall continue these operations until I test fully the expansibility of the lung. If the lung does not expand, I shall have to stop. Thus far there has been no material reduction in the level of the line of dulness. The position of the heart has changed slightly: from being somewhat to the right of the sternum it has moved to a point just at the left edge of the sternum. This certainly indicates less pressure within the left chest. Such a case as the present is a very interesting one. There has been scarcely any fall in the level of dulness, therefore the lung has not expanded to any extent, and yet the heart is getting back into its natural position. How can this fact be explained? If the left lung has not been able to expand, we must at least consider that the effused liquid is not exerting so much pressure, and that the heart has come back owing to the diminution of pressure.

Another very strange fact. It has lately been asserted by Prof. Baccelli, of Turin, that the voice is much better transmitted through serum than through pus; in fact, that there is very little transmission of the voice where the effusion is purulent: yet in this case, where the presence of pus is undoubted, the vocal fremitus is transmitted quite clearly.

[These aspirations of small amounts of pus at a time were continued, but the patient gradually grew worse and worse. The hectic increased; he lost flesh and strength rapidly, and was finally entirely confined to bed. A drainage-tube was then introduced into the left chest through the point where the puncture had been made (fifth interspace, outside of the left nipple) and the effusion entirely evacuated. No expansion of the left lung took place. The amount of discharge gradually diminished,

and its character changed, until there were only about six ounces of sero-pus daily. No improvement occurred in the general symptoms. There were occasional exacerbations of catarrhal disease in the right lung, and at present—July 15, 1878—the patient is in a very low state. Despite the purulent characters of the liquid, I regret having yielded to his solicitations, as I think I have clearly shown elsewhere that in cases of pleural effusion, where pulmonary phthisis is believed to exist, operative interference is never productive of benefit.]

CYLINDRICAL EPITHELIAL CARCINOMA OF THE OMENTUM.

BY S. W. GROSS, M.D.,

Surgeon to the Jefferson Medical College Hospital.

A TAILOR, 50 years of age, was admitted into the Jefferson Medical College Hospital, November 7, 1877, on account of a tender, hard, globular, subcutaneous tumor, which was seated in the linea alba, and evidently communicated by a pedicle with the interior of the belly. The man was thin, weak, and sallow, and broken down by previous suffering.

He stated that he had been affected for six weeks with bronchitis and burning pains in the umbilical region, the latter of which, having become continuous and fixed for three days, led him to detect the circumscribed swelling on the 7th of August. In the interval he had lost flesh, strength, and appetite, and the suffering was aggravated by the ingestion of food. The bowels were inclined to be costive; there was no vomiting; and the burning pain, which, along with emaciation, and loss of appetite and strength, was the prominent symptom, lasted up to the date of operation, being quite violent at times, but particularly after eating, and frequently depriving him of sleep.

On removal, the tumor was found to lie on the aponeurosis of the external oblique muscle, and to be connected, through an opening in the linea alba, with the omentum by a rounded pedicle one-third of an inch in diameter and half an inch long. A ligature having been cast around the foot-stalk, the mushroom-like mass was cut away, and the wound dressed in the ordinary manner. After the operation the appetite improved, and the pain was greatly diminished, and he was discharged at the expiration of a fortnight. Ascites, however, gradually made its appearance; the improvement was only temporary, and death ensued on the 14th of January, 1878. Unfortunately, a post-mortem inspection of the body was denied.

The neoplasm was one inch in diameter, moderately firm to the touch, finely nodulated, and surrounded by a delicate capsule of loose connective tissue and fat, which dipped in between the nodules. On section, the surfaces were white and alveolated, the spaces being separated by bands of fibrillar connective tissue, wide in proportion to the diameter of the alveoli, which were always minute.

$\frac{225}{1}$

On microscopic examination, for which and for the drawing I am greatly indebted to Dr. E. O. Shakespeare, thin stained sections presented pictures which corresponded to the descriptions and illustrations of many authors of cylindrical-celled epithelioma. "The great mass of the tissue consisted of wide bands of parallel bundles of connective tissue in a state of inflammatory irritation, and passing in every direction. In these, and parallel with their course, were the blood-vessels. In many portions of this mass were seen rather numerous roundish alveoli, the walls of many of which were lined with a single layer of well-defined columnar epithelium, consisting usually of a protoplasm slightly granular, a single, large, double-contoured nucleus, located nearer the attached than

the free extremity of the cell, and often also of a thickened line forming the free or butt end of the cell. The diameter of the latter was usually about one-fourth to one-third of its length. The walls of the alveoli were only partially covered with this single layer of epithelium, and the cells, instead of always exhibiting the characters above described, were sometimes greatly swollen, and almost entirely filled by a colloid substance. The lumen or central portion of the alveolus was either entirely empty, or filled, partially or completely, with an amorphous, transparent, colorless material, containing a few scattered minute dark granules and cellular detritus. The walls of a few of the alveoli were entirely denuded of their covering of cylindrical cells, the lumen being filled with a colloid mass, interspersed here and there with epithelium in a state of colloid metamorphosis. In addition to the round and oval-shaped alveoli, tubes, which were also lined with a single layer of columnar epithelial cells, were often seen. Many of these channels, both the alveolate and tubular, were in communication with one another."

From the stand-point of pathological histology, it is interesting, in the absence of a post-mortem examination, to determine whether the neoplasm was merely a secondary deposit in the omentum, or whether it was a primary heteroplasia of the elements constituting that organ.

In an elaborate paper, "Ueber Carcinoma Peritonæi,"* Dr. Theodor Petrina has collected forty cases, of which fourteen were primary and twenty-six were secondary growths of that membrane. Of the former, nine were encephaloid and five were scirrhous tumors; of the latter, fourteen were encephaloid, ten scirrhous, and two colloid formations; the primary disease having been seated in the stomach and pyloric end of the duodenum in seventeen, in the ovaries and its tubes in four, in the liver in three, and in the pancreas in two cases.

To those who believe, with Waldeyer, that carcinoma always has an epithelial origin, the above statistics are worthless; since in primary carcinoma of the peritoneum the only elements that can participate in the proliferation are the endothelial cells covering the connective tissue net-work, the connective tissue corpuscles, and the nuclei of the vessels. Such accurate observers as Cornil and Ranvier,† however, describe primary carcinoma of the peritoneum, and state that it usually commences in the omentum as encephaloid, scirrhus, or, more frequently, as colloid; and Rindfleisch‡ holds the same views. These authorities make no allusion to primary cylindrical epithelioma; so that if it be assumed that the growth under consideration was protopathic, the presence in it of columnar epithelium can only be ascribed to a heteroplastic process. In support of such a view, many analogies might be adduced. Thus, H. v. Wyss§ has described a colloid cyst, situated between the abdominal muscles and peritoneum of an adult, which contained, in addition to the fluid contents, ciliated cylindrical epithelium; and similar appearances were met with in a large cyst on the posterior wall of the œsophagus, an inch and a half above the cardiac orifice of the stomach. Hence the cysts were heterologous as regards their origin, as they were found in situations in which there is no normal ciliated epithelium. In the same way the tumor which I have described may be regarded as a primary heterologous or heteroplastic production.

With the followers of Waldeyer, if the view be taken that the tumor originated in the omentum, we may ascribe its development to a germ from the glandular layer of the embryo, which was displaced and included in the tissue of the omentum. In this way Dr. Kolackek‖ has quite recently explained the origin of a voluminous tumor of the lower jaw of a woman, aged 28 years. After removal by excision of one-half of the bone, the mass proved to be an adenoma undergoing cystic degeneration. "The structure was exquisitely acinose, the acini being lined by a layer of cylindrical cells." The occurrence of a cylinder-celled epithelioma in the omentum surely cannot be held to be more remarkable than the formation of an adenoma within the osseous tissue.

Instead of being a carcinomatous outgrowth of the omentum, the neoplasm may have been a primary cylindrical epithelioma

* Prajer Vierteljahrschrift, Bd. 2, p. 41, 1872.

† Manuel d'Histologie Pathologique, troisième partie, p. 965.

‡ Text-Book of Pathological Histology, p. 273.

§ Virchow's Archiv, Bd. 41, p. 143.

‖ Centralblatt für Chirurgie, No. 38, 1877, and New York Medical Record, March 23, 1878, p. 229.

of the transverse colon or small intestine, which, from its original seat in the mucous membrane, progressively invaded the other coats of the gut, and finally formed a polypoid nodule, which protruded through the opening in the linea alba, where it gradually increased in size. The absence of nausea and vomiting and hemorrhage, the presence of which would rather have denoted carcinoma of the stomach, and the constipation and intense suffering after the ingestion of food or during the peristaltic action of the intestines, would point to the origin of the tumor in the small intestine; although it should be stated that in the cases of carcinoma of the peritoneum, analyzed by Dr. Petrina, dyspeptic symptoms, pain, constipation, and subsequent ascites were the prominent phenomena.

Although the general history of cylindrical carcinoma of the stomach, intestines, gall-bladder, and biliary ducts is that it gives rise to secondary nodules in the liver, without involvement of its serous covering or of the peritoneum elsewhere, and although I have been unable to discover an example of secondary infection of the omentum, yet I am disposed to regard the tumor in question as a secondary formation, either by the usual way of generalization or by contact with an underlying mass, through which the endothelial cells of the omentum were converted into cylindrical epithelial elements. Whatever view may be taken of its origin, the case is none the less remarkable from a surgical standpoint, in being, so far as I can discover, the only example of removal, during life, of a cylindrical epithelioma which was developed in the cavity of the abdomen.

ENEMATA.

BY HORACE Y. EVANS, A.M., M.D.

THE literature upon the subject of enemata is intimately associated with the court history of the rulers of Italy and France, and it is only through the court gossip of the years called the "golden" that we can obtain information as to the origin and progress of this mode of medication.

The introduction of the enema-apparatus forms an important epoch in the history of medicine. The credit of the invention of this useful instrument is due to one Gatenaria, an Italian. He was a professor at Pavia, where he died in 1496, after having spent several years in improving his instrument. The mode of treating certain disorders with his apparatus was at once adopted by all the court physicians of Italy and France. Their royal patients hailed the invention as a blessed escape from the horrid compounds with which they had been accustomed to drench their stomachs, and so infatuated did they become with this novel method that Bouvard, physician to Louis XIII., administered no less than two hundred and twenty enemata to his majesty in the course of six months. In the first year of the reign of Louis XIV. its employment became so general and fashionable that it ceased to be confined to the narrow limits of medicine, and became a necessary accompaniment of the daily bath: hence the title of *lavement* given to this mode of cleansing the inner man.

It was believed that rectal ablutions cleansed and beautified the complexion; and with this object in view the ladies and courtiers were in the habit of using as many as four enemata a day.

The invention of Gatenaria was made subservient not only to pleasing the sight, but also to satisfying the delicate perceptions of the olfactory nerves. As a consequence, the injections were made fragrant with the most costly perfumes, such as rose, angelica, bergamot, and orange. So delightful were the results that Kernot exclaims, "Oh that this fashion would return!" The medical profession at first hailed the invention as one destined to be of great service, but so rapidly did it overleap its legitimate sphere and come into vulgar use that its application ceased to be fashionable with the profession, and was ultimately handed over to the barbers and nurses, where it remained until the theory of "status sthenicus" became a ruling idea in the professional mind. Not until then did the instrument find its proper place in the armamentarium of the physician. The original instrument was a straight plain barrel or cylinder, with wooden piston and cotton packing. From the time of Gatenaria's discovery to the present date, a period of four centuries, the inventive genius of men of all nations seems to have been exercised in modifying and perfecting this instrument. The name of the apparatuses now occupying dusty corners of garrets, cellars, and shop windows is Legion.

The Italians, Spanish, French, Germans, English, and Americans have each their favorite instrument, but as a nation the French have the greatest variety and are the most addicted to its use. It is said that when the Prussians captured Strasburg, in the late Franco-Prussian War, they found such quantities of the *irrigateur* in that city that they converted them into tobacco-pipes. Correspondents frequently observed soldiers puffing smoke from anal nozzles.

The principle of the original Gatenaria syringe, with numerous modifications, continues to be employed at the present day,—the materials used in the manufacture being pewter, brass, glass, and rubber.

The syringe that has been most popular with the French and English, though less so with us, is the one which is so constructed with inlet and outlet valves and air-chamber that it produces a constant stream.

The most deservedly popular and efficient of the apparatuses thus far produced are the Matson's and the Davidson's syringes,—the former having a rigid inlet tube, and the latter a flexible one.

As the great desideratum of an enema-apparatus is simplicity of construction without impairing its efficiency, we can scarcely expect any improvement in this respect over what is known in this country as the fountain or gravity syringe. This consists of an elastic rubber tube of three-eighths of an inch calibre and varying in length from four to six feet. One end of the tube is funnel-shaped and will contain two quarts of fluid; to the other is attached the rectal nozzle. The stream produced is a continuous one, its force being dependent upon the elevation of the larger end.

The part affected by an enema is the large intestine, consisting of the cæcum, colon, and rectum. It is five feet in length, and constitutes about one-fifth of the whole intestinal canal. Its average diameter in the adult cadaver is two inches, and when it is moderately distended with fluid its capacity is from four to five quarts, any afflux of the contained fluid into the ileum being prevented by the coaptation of the margins of the ileo-cæcal valve. The amount of fluid that the large intestine in a *living* subject will contain, and the highest point in the canal to which it can be forced per anum, are questions of considerable importance in the treatment of certain disorders.

The experiments of Dr. Von Trautvetter (*Deutsches Arch. für Klin. Medicin*, vol. iv. p. 476) show "that the intestines during life are capable of receiving the same amount of fluid as after death."

Professor Mosler (*Berlin Klin. Woch.*, November 10, 1874) "has with the Hegar irrigator, which corresponds with the common fountain syringe, introduced five litres of warm water into the large intestine at one time."

I have not been able to find recorded another instance in which the bowel was induced to retain so large a quantity (almost five quarts) of fluid, it being more than double that which I have succeeded in getting to remain at one time in the intestine.

Dr. Fagge (*Guy's Hospital Reports*, 1868, p. 319) reports a case of disease of the sigmoid flexure in which four pints of warm water were injected and retained.

M. Briquet (*Rev. de Thérap. Méd.-Chir.*, January 15, 1857) says, "Enemata may readily be passed as far as the cæcum."

Professor Simon of Heidelberg (*Ed. Med. Journal*, April, 1874, p. 946) has tested the matter as to whether the fluid really passed into the cæcum. In a patient having a fecal fistula quite near the ileo-cæcal junction, "a pint and a half of warm water passed so rapidly through the large intestine that in two minutes it streamed out of the fistula."

It is not necessary, however, to have a patient with a fecal fistula to demonstrate this fact: percussion over the cæcum while the fluid is being introduced gives such positive evidence of its reaching and occupying that part of the canal that it cannot be doubted.

In the hands of some, the colon tube has facilitated the introduction of fluids far up into the bowel. Thus, Dr. Bodenhamer (Physical Exploration of the Rectum, p. 38) says, "I have introduced my bougie and tube with perfect facility six inches into the iliac colon in numerous instances," and Von Trautenheimer (*Practitioner*, vol. ii. p. 377) found "that with a large tube fluids could be forced to the junction of the large and small intestines."

Professor H. R. Storer (*American Journal of Obstetrics*, vol. i. p. 74) reports a case of ulceration of the bowels "from which she never got ease till I applied a strong

solution of nitrate of silver through a rectal or rather colonic hollow bougie, passed through the sigmoid flexure, and until its extremity could be felt by external palpation in the right inguinal region at the seat of pain."

My own experience in regard to the introduction of the colon tube is that in one case in ten it can be passed as far as the junction of the transverse and descending colon.

The sigmoid flexure in a very large proportion of cases is almost an impassable barrier to a moderately rigid tube; and it has only been possible in my hands to overcome the tortuosities of the canal in this locality by distending the bowel to a painful degree with fluids.

By the time that these obstructions are overcome, the elevated temperature of the parts has made the tube so flexible that should it come in contact with a fold of the intestine it will coil upon itself.

That this feat of passing the colon tube the entire length of the large intestine has been performed we cannot gainsay; but our own experience convinces us that the cases in which it can be done are very exceptional ones.

The antagonism of physiological teaching to the daily experience of the profession in regard to the efficiency of nutrition per rectum appears irreconcilable. That the large intestines are voracious absorbents cannot be doubted. It is a common experience with the habitually constipated to have large injections of water retained and absorbed. I have known as much as a pint and a half of warm water to be retained by the large intestines without modifying the dry character of the stool on the following day.

Dr. Fagge (*loc. cit.*) reports an instance in which "four pints of warm water were retained and absorbed."

If the conditions necessary to a rapid absorption are a delicate mucous membrane and a copious supply of sub-mucous veins, then the rectum is not inferior to the stomach in this respect. (Anstie, *Medical Times and Gazette*, March 28, 1863.)

Savory (*Lancet*, May 9, 1863) asserts that "a substance in a state of solution fit for absorption will pass into the system more freely through the rectum than through the stomach."

The vital question in regard to nutritive enemata is, Do they ever undergo digestion in the large intestine? Anatomically, this part of the intestinal canal is absolutely devoid of any thing that would indicate the possibility of its performing a function such as that under consideration. Neither salivary, gastric, intestinal, nor pancreatic juice, nor bile, is secreted here. Nor does it posses villi or valvulæ conniventes.

"In the large intestines" (Dalton, Physiology, 6th edition) "the mucous membrane is smooth and slimy, free from villosities, and provided with a glandular apparatus different in structure and function from that of the small intestines."

Dr. Maxwell (*Philadelphia Medical Times*, April 11, 1874) insists that "from the ileo-cæcal valve to the anus there is not a gland or a membrane that secretes a digestive fluid."

And Briquet (*loc. cit.*) states "that the secretions of the large intestine exert no chemical influence over the substances injected, and nothing is absorbed which was not previously in a state of solution."

Furthermore, "the secretions of the rectum, unlike those of the stomach, are alkaline, and consequently many medicines, which are readily absorbed after undergoing decomposition by the gastric acids, are not adapted to affect the system when administered by the rectum. . . . Still more strikingly is this the case with food; and hence the impossibility of long sustaining life by means of nutritious enemata. In regard to the capacity of the rectum for the absorption of nutriment, there are probably cases in which this function, however limited, may be made of great service." (Stillé, Therapeutics, 4th edition.)

Dr. Peaslee (*New York Medical Record*, January 19, 1878) regards the value of rectal alimentation as inestimable. Yet he does not think there was any *digestion* whatever of the aliment so used.

Notwithstanding the absence of evidence to show the existence of a digestive function, vicarious or otherwise, in the large intestine, there can exist no doubt as to the truthfulness of the statements regarding the use of nutritive enemata in supporting life when the natural channel for the introduction of food has failed. The testimony in this respect is certainly conclusive, as a brief reference to some of the noteworthy cases recorded will exhibit.

Dr. Pierce (*American Journal of the Medical Sciences*, October, 1852, p. 571) reports a case of ulceration of the stomach which he sustained solely with nutritious enemata for *three months*.

Chambers (Renewal of Life, p. 426) refers to an hysterical woman who was supported by nutritious enemata for *two weeks*.

Brown Séquard (*Lancet*, January 26, 1878) reports three cases of spasmodic contraction of the œsophagus, sustained one for *five*, another for *six*, and the third for *eight days* by meat and pancreas injections.

Theodore Williams (*Lancet*, October 24, 1874, p. 158) supported a patient by nutrition per rectum for *ten days*, during which time he gained in flesh.

Dr. Kauffman (*Lancet*, December 8, 1877, p. 856) had nine patients, seven of whom were suffering from cancer of the œsophagus, one from cancer of the pylorus, and the last from chronic ulcer of the stomach. All were supported with beef and pancreas enemata. They were able to walk about, and lived for *nine* or more *months*.

Davis (*New York Medical Record*, February 27, 1878, p. 158) sustained a patient by rectal alimentation from August 26 to October 18.—*fifty-two days*.

Dr. Baldwin, of this city, mentions a case of irritable stomach supported for *two weeks* by enemata alone.

Austin Flint (*American Practitioner*, January, 1878) refers to three cases maintained by nutrition per rectum,—one of them during *three weeks*, one for *twenty-eight days*, and the remarkable one under the care of Dr. Bliss lived for *fifteen months*.

Dr. Flint proposes the following explanation of what he considers a clinically established fact, that digestion and assimilation are performed in the large intestines:

"Food introduced into the rectum excites secretion by the gastric and intestinal glands, and, in the absence of ingesta in the stomach and small intestines, the fluids secreted by these glands pass into the large intestines in a sufficient quantity to effect digestion within the latter."

Recognizing the limited powers of the lower bowel in the performance of this function, we should select nutrients with the least possible detrita. Following this view, I have been in the habit of using strained animal broths, and in lieu of milk I employ the whey therefrom. Two ounces of each of these with a teaspoonful of whisky every three or four hours have acted so efficiently and promptly in arresting exhaustion and in restoring vitality that I cannot but think that the rectum absorbs more rapidly than the stomach. Leube (*Practitioner*, vol. ix. p. 104), in his résumé of the effects of his "pancreatic meat emulsion," says, "the injections always produce at least a temporary increase in the fulness of the pulse, an improvement of the general condition, and a relief to the anxiety of the patient."

Among the numerous disorders in which rectal alimentation is demanded are those implicating the œsophagus, such as tumors, spasms or strictures, paralysis of the muscles of deglutition, gastritis, ulceration of the stomach or diseases of its cardiac or pyloric extremity, hæmatemesis, coma, delirium, strictures or other obstructions of the bowels, and the irritable stomach attending pregnancy. Advantage has been taken of the mechanical assistance afforded by the injection of fluids or air into the bowels, as in invagination, intussusception, early stage of hernia, strictures, and fecal plugging.

Dr. Brinton (*Dublin Journal of the Medical Sciences*, May, 1869, p. 426) gives a rule by which fluid enemata will enable us with more or less accuracy to decide the locality of an intestinal obstruction. If one pint of fluid only is retained, the difficulty is in the rectum. If two or three are retained, it is at or in the sigmoid flexure. A still larger quantity indicates the colon as the seat of the trouble.

In one case in which the obstruction was at the upper part of the ascending colon, nine pints of fluid were introduced.

The most favorable position of the body for the retention of large injections is upon the knees, with the head and shoulders depressed. 98° Fahrenheit is the most acceptable temperature for the fluid, which should be slowly introduced.

The efficiency and promptness with which medicines act when introduced through the rectum have been abundantly proven by reliable observers.

Savory (*Lancet*, May 9, 1863) found that the salts of morphia produced constitutional effects when administered per orem in from three to nine minutes, whilst per anum the same results were produced in from two to six minutes. So also were

strychnia and nicotine more rapid in their action when given by the bowel.

Anstie (*loc. cit.*) believes the rectum a more rapid channel than the stomach, and that it is on a par with the cellular tissue as to celerity.

He produced cinchonism in twenty minutes by an enema containing one scruple of quinia, and a colliquative diarrhœa was arrested in fifteen minutes by thus using opium.

Briquet (*loc. cit.*) states that "injections of quinia when larger than fifteen grains are not well received, and not more than one-fifth of it is absorbed," and further that "it is very difficult to produce cerebral symptoms by its introduction into the bowel."

We must remember that these latter experiments were performed as early as 1857, and it may not then have been known that for rapid and effective absorption the materials must be in thorough solution. In regard to the doses of medicines to be thus used, authorities differ so widely that it is well to recollect Professor Stillé's warning, "That these discordant facts and opinions should suggest a cautious use of powerful medicines by means of enemata." (Therapeutics and Materia Medica.) Dr. R. J. Dunglison (Physician's Reference Book) gives as a safe rule, "except when using very potent medicines, three times as much per anum as per orem."

The quantity of the vehicle, in order that the enema be retained, should not for an adult exceed three or four ounces.

The great number of conditions indicating the propriety, advantage, and necessity for rectal medication makes it impossible in a paper of this character to attempt anything further than a brief reference to a few of them.

In any condition, organic or functional, calling for a derivative action from the brain, kidneys, bladder, or uterus, or in one requiring a local and general anodyne effect,—that is, in gastritis, enteritis, colitis, cystitis, uterine or intestinal colic, chordee, prostatitis, etc.,—enemata may be of great value.

In helminthiasis medicated enemata have both destroyed and removed tænia and the oxyuris vermicularis, when they occupied the large intestines. The most frequent condition, however, requiring the use of enemata, medicated or otherwise, is that of constipation.

The protestations of the profession against this mode of treating what is merely a symptom of a diseased condition have not arrested a habit which thousands have, from long experience, found to be comforting, useful, and comparatively innocent, if not curative.

Green Street, Philadelphia.

NOTE ON THE USE OF OLEATE OF MERCURY IN EYE-DISEASES.

BY M. LANDESBERG, M.D.

THE yellow oxide of mercury, used in oculistic practice, has these two great inconveniences: 1, it is very liable to decomposition; 2, it is very hard to triturate.

Whatever constituents may be used for the ointment, decomposition sets in sooner or later. The ointment, which, if properly attended to, is of a fine yellow color, becomes after a short time dirty-yellowish, smells rancid, and loses its healing power.

How difficult it is to triturate the yellow oxide of mercury, is proved by the fact that the correct composition of the ointment is found with only few druggists. This experience I made not only in this country but also in Germany. The yellow oxide of mercury must be rubbed with its vehicle with great care in order to impart to it the proper consistency and fineness. But few druggists seem to be aware that any inaccuracy of composition destroys the efficacy of the preparation.

Some months ago I was induced by Mr. L. Wolff, successor to G. Krause, apothecary, to try in my practice as a substitute for the yellow oxide of mercury the oleate of mercury, which, for other purposes, was first introduced into the profession by F. Marshall in 1872.

For experimental purposes he kindly submitted to me some samples, composed of the oleate of mercury and cosmoline, in the same proportions as I have been using the yellow oxide of mercury.

From an experience extending over several months, gained in a large number of conjunctival and corneal affections, which I treated according to the same indications with the new preparation as formerly with the yellow oxide of mercury, I am fully justified in saying that *the oleate of mercury has all the qualities that will render it fit to supplant entirely the former preparation in oculistic practice.*

The oleate of mercury is mixed very

easily with cosmoline, undergoes no decomposition or rancidity, and remains for any length of time without the slightest alteration. It may be prepared in its proper form by any skilful pharmacist. The ointment presents a yellowish, diaphanous substance of slightly firm consistency. Brought between the eyelids it readily melts, and can be rubbed in so completely that not the smallest particle remains. Its capability of assimilation and absorption is very great. The reaction of the eye upon the application is but inconsiderable, less than upon the use of the yellow oxide ointment.

The only precaution to be observed by the pharmacist in preparing the oleate is to see that the oleic acid be pure and that it be recently prepared with fresh oil of sweet almonds.

1605 Arch Street, Philadelphia.

NOTES OF HOSPITAL PRACTICE.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

CLINIC OF PROF. T. GAILLARD THOMAS, FOR DISEASES OF WOMEN.

Reported by P. Brynberg Porter, M.D.

(Continued from page 469.)

DOUBLE ANTEFLEXION—PROLAPSED OVARY.

THE next patient is Annie H., a native of England, and 24 years of age. She has been married seven years, and has had one child, but no miscarriages. The child was born six years ago, or one year after her marriage. How long have you been sick? "Four years." Did you get perfectly well after the birth of your child? "Yes." Have you never felt quite well during the last four years? "Not for more than two or three weeks at a time." From what do you principally suffer? "Headache and backache." When do you have these? "I have the backache every morning after I get up, and the headache at different times." You do not feel the pain in the back later in the day? "No." Do you suffer much at your monthly periods? "I used to suffer a good deal, but do not have so much pain now. Still, I always have a spell of biliousness and vomiting before my sickness comes on." Can you stand and walk well? "I am excessively weak, and the least exertion fatigues me." Do you feel much exhausted after your monthly sickness is over? "Yes." Is there anything else that you complain of? "Sometimes I have a bad pain in my hip and groin." Then you have been a great invalid? "Yes, I have had to doctor all the time." What troubles you the most of all your symptoms? "The headache and backache."

This patient presents symptoms enough to show a good deal of disorder about the pelvic organs, and so, as I read the diagnosis which I hurriedly made in my private room before the lecture, I feel that I have not got at the whole truth in this case. On introducing my finger into the vagina, I found the cervix uteri bent forward very decidedly and the body bent on the cervix. In other words, it was a case of double or cervico-corporeal anteflexion. This was all that I made out at the time; but it does not seem to account satisfactorily for all the symptoms. When you get into practice you will meet with some patients upon whose statements you will instinctively place great reliance, and some others to whose assertions you will pay no attention whatever; and I think both of the women who have been before you to-day can be placed in the former category. Mrs. H. has given us a very straightforward account of herself, and so I feel that this biliousness, as she calls it, before her menstrual periods (vomiting preceded by some headache) is a matter of a good deal of importance, and not fully explained by the flexion which I have found to exist. It is true that there are menstrual headaches, and I know at least a dozen ladies who are subject to them; but in this case I strongly suspect some ovarian complication which I did not discover in the examination which I made in the case.

The flexion would sufficiently account for the dysmenorrhœa which lasted for several years and has now passed off, and for the sterility which has existed for the last five years. Suppose, on making a further examination, I am still unable to detect anything abnormal about the ovaries: we shall then have to suppose the other symptoms due simply to general nervous derangement, and hope for their relief, to some extent at least, by the straightening of the uterus. How is this to be done? I should begin at once with the uterine repositor, and, after using it for about half

a minute and straightening the canal to but a very limited extent the first time, allow the organ to fall back into its present position. In two or three days the manœuvre should be repeated, and then again and again, until the organ had become accustomed to such treatment, when an anteversion pessary should be introduced. Even while the patient is wearing the pessary the uterus should be stretched out from time to time by means of the sound or repositor. After a while the uterine nerves, which have long been in a disordered state on account of the malposition of the organ, would become restored to their natural condition by means of the equalization of the uterine circulation, and the whole system would no doubt become greatly improved. [The following week Dr. Thomas concluded the case as follows:] Since the patient was before you, gentlemen, she has at my request been examined more thoroughly by my clinical assistant, Dr. Ward, and he reports that on resorting to conjoined manipulation one of the ovaries was found to have fallen down beside the uterus, and that when pressure was made upon it between the fingers of the two hands it caused her such acute pain that she almost jumped off the table in consequence of it. This, then, makes the case complete to my mind, and perfectly clears up all that was obscure about it. This pain of which she complains ought not really to be called dysmenorrhœa, because it anticipates the flow by several days. There is such a thing as painful menstruation, and, again, such a thing as painful ovulation. All the symptoms of which the patient complains are thus explained. It is a case of no special interest; but I have thought it worth while to bring it to your notice again to-day for the purpose of impressing upon you the very great importance of finding out in such cases whether the ovaries are in a normal condition or not. When it has been ascertained that chronic ovaritis is present, you have gained two very useful points.

The first is that you know that you can probably afford your patient a certain amount of relief by the appropriate treatment for this affection. The second is that you will be kept from promising too much in the way of treatment.

The replacement of a flexed uterus is not ordinarily a difficult matter (though it happens to be in this particular instance), and when this has been accomplished you can usually look for the cessation of the dysmenorrhœa on account of the straightening of the uterine canal. But here, in addition to the pain produced by the mechanical obstruction caused by the flexion, we have what is known as ovarian dysmenorrhœa (though, as we have seen, the pain precedes the flow), and that is altogether a different matter, which requires special treatment, as has been indicated, and from which it could scarcely be hoped to obtain complete relief.

PRURITUS VULVÆ.

The next case, gentlemen, is one of that kind which the more you try to study up in the books the more perplexed you will probably become in regard to. The patient, Mrs. Elizabeth M., is 50 years of age, and a native of Ireland. She has been married twenty-six years, and has had seven children and one miscarriage. She tells us that she has passed the menopause, but that it did not occur until a year ago, when she was forty-nine years old. She has been complaining of the trouble for which she comes to consult us for at least twenty-five years, so that we are at all events justified in calling it a chronic case. There is but one symptom in the case (though it is a sufficiently terrible one), and that is, a constant and excessive itching about the genitals. In other words, we have here one of those banes of a physician's existence, *pruritus vulvæ*.

That this is no trifling matter you may very readily understand when you reflect that this woman has been thus suffering for a quarter of a century, and yet has been living in a city like New York, where there are so many facilities for obtaining relief from almost every kind of ailment. Nevertheless, judging from the condition of the vulva, I should say that the affection was quite as bad to-day as it has ever been, though the patient tells me that it has at times been even a little more aggravated. She says that she had always hoped that when the change of life came she would obtain some relief from her misery; yet in this she was entirely disappointed. Unless you have investigated the subject particularly, you can form no conception of the torments which women afflicted in this way suffer. This patient informs me that she frequently lies awake for many hours at night in consequence of the terrible itch-

ing, and that it is wholly impossible for her to keep from scratching the vulva, which, of course, only increases the irritation of the parts.

Let me now give you the result of the vaginal examination. The first thing that struck me was the exquisite sensitiveness of the labia majoræ, and on separating these with my fingers I discovered quite a free leucorrhœal discharge escaping from the vagina, though the patient had not mentioned this at all in describing her case. I found that the whole uterus had undergone the physiological atrophy resulting from the menopause, with the exception of the cervix, while this was uncommonly large, so that the entire first phalanx of my fore-finger passed into its canal. All the vagina, vulva, anus, and buttocks are intensely red, and almost eczematous in appearance. In all such cases as this you must remember that, whatever may be the pathological condition present, what the patient wants, and as speedily as possible, is to get relief from her suffering. It is also well to remember that in almost every case of pruritus vulvæ which you meet with you will have to look for a different cause, for their name is legion. Some little time since, a patient came into my hands whom I found almost wild from loss of sleep and from the use of opium in consequence of pruritus. She had only become an opium-eater during the three weeks previous, but her sufferings were so intense that she had at last been driven to this pernicious habit. On making a careful examination of the genitals and the pelvic organs I was not able to discover any condition about them which seemed at all likely to give rise to the trouble: so I tested the urine for sugar, and, finding it present in large quantities, the matter was at once settled.

It is now a well-recognized fact that diabetes mellitus is not an uncommon cause of pruritus; and therefore, whenever you have a case of the affection, and are unable to find any other satisfactory cause for it, you should never fail to examine the urine. For some reason this saccharine urine is apt to have a peculiarly irritating effect upon the vulvar mucous membrane. In certain cases of pruritus the bi-borate of soda and the bichloride of mercury have been found useful as local applications; but the only way to treat pruritus successfully is to do away with the cause, whatever it may be; and you can never cure diabetes by applying borax or corrosive sublimate to the vulva.

In some cases a patient who has suffered, it may be, for years, can be cured at once. If, on a careful scrutiny of the mons veneris and other parts with the eye, or a magnifying-glass to assist it, you discover the little *acarus*, you have only to make a few applications of sulphur ointment, when the patient will be entirely cured. Even when this parasite is present, it is often extremely difficult to find it, on account of the irritation of the skin produced by scratching; but if you can find a little red line or track, leading to a slightly elevated point, you may be pretty sure what it is that is doing the mischief.

I do not propose, however, on the present occasion to go into all the causes of pruritus, as I think a clinical lecture is hardly the place for such an enumeration. All I wish to do now is to impress upon you the very great importance of getting at the real cause, whatever that may be, in every individual case. Still, I may perhaps add one or two more to those which I have already mentioned. True eczema is among the causes. In the present case the skin about the genitals presents very much the appearance of eczema, as has been stated; but this is only the result of the pruritus. In others, the latter depends on eczema for its origin, and in such cases you should not treat the pruritus, but the eczema. The treatment would then probably consist of arsenic, a change of diet and hygienic surroundings, and attention to the condition of the skin. But how, it may be asked, are we to decide whether the eczema is the cause or only a result of the pruritus? If it is true eczema, you will almost invariably find evidences of it in other parts of the body, as, for instance, behind the ears, or upon the hands. The same is true of some other skin-diseases.

By far the most frequent of all the causes of pruritus I have found in my experience to be vaginal leucorrhœa. Does any one inquire, what special kind of vaginal leucorrhœa? I really do not know, except that it is that kind of acrid discharge which will cause a burning sensation in the fingers for fifteen or twenty minutes after one has made a vaginal examination in a case where it is present, notwithstanding the fact that they have been thoroughly washed with soap and

water. It is this kind of leucorrhœa which will set up a urethritis in the male (after connection), which can only be distinguished from that of a specific character by its short duration and easy curability. If in any given case you desire to test whether vaginal leucorrhœa is the cause of the pruritus, thoroughly tampon the vagina with cotton, which should properly be saturated with glycerole of tannin. If it is really the cause, this mere damming up of the discharge will make the matter clear; for in twelve hours the patient will experience the greatest relief from her suffering.

This, I cannot but believe, is the pathology in the present case. The eczema is undoubtedly due only to the scraping of the skin by the nails, and it is really a wonder that there is not more irritation here than there is. There is no eczema in any other part of the body, and the leucorrhœa noted offers a sufficiently satisfactory explanation of the condition. Such being the case, it cannot be cured by tamponing, or by the local application of such remedies as I have mentioned. If there was one of them which would stop the supply of the leucorrhœa, it might answer, but, unfortunately, none of them can do this. It is, indeed, a very difficult matter to accomplish, and it is altogether possible that we may not be able really to cure this patient, though I hope we shall, at all events, be able to give her a considerable amount of relief.

In the first place, this cervix is so suspiciously open (now that the menopause has been over for a year) that I am inclined to suspect that there is a polypoid growth in its canal so high up that I am unable to reach it with my finger. If there is any such growth present, of course it should be removed; but if there is not, the patient should use frequent injections of bi-borate of soda in solution, and once or twice a week the cervix should be thoroughly cleansed of mucus, and nitrate of silver applied. Occasionally, also, chemically pure nitric acid should be used, with the hope of altering the secretion. Copious injections of water should be used continually, and, in addition to the other treatment suggested, the patient should once or twice a day press up against the cervix a suppository of butter of cacao containing five grains of tannic or gallic acid, which will have the effect of preventing a free flow of mucus.

TRANSLATIONS.

Endoscopic Appearances in the Various Forms of Gonorrhœa.—J. Grünfeld (*Cbl. f. Chir.*, 1878, No. 21; from *Wiener Med. Jahrb.*), as a result of his experience with the endoscope, comes to conclusions somewhat different from those of Désormeaux. He distinguishes the following forms of urethritis:

1. *Urethritis blennorrhoica*, the acute blennorrhœa of the urethra without complication. The field of vision of the endoscope is filled with greenish pus, the mucous membrane underneath markedly reddened, greatly puffed out, and showing erosions here and there. The so-called lacunæ of the mucous canal are wanting, or their depth is reduced to a minimum.

2. *Urethritis membranacea*, characterized by striated layers of grayish-white membrane, the removal of which gives rise to slight bleeding. This form of disease is ordinarily complicated by inflammation of the dorsal lymphatics of the penis.

3. *Urethritis simplex*, a less marked variety of U. blennorrhoica, the mucous membrane being somewhat red and swollen, with injected blood-vessels; the lacunæ decidedly evident.

4. *Urethritis granulosa.* The mucous membrane is evenly colored; no isolated blood-vessels can be seen; wrinkles are for the most part wanting, but numerous punctiform elevations can be perceived which are distinguished by reflecting light from their surface.

5. *Urethritis with the formation of abscesses*, which occasionally originate in herpes blebs, occasionally are chancrous sores, and sometimes proceed from badly-treated strictures. X.

A Case of Hemorrhagic Coxitis cured by Puncture.—C. Langenbuch, in the *Deutsche Zeitschr. f. pract. Med.* (*Cbl. f. Med.*, 1878, p. 285), gives the case of a 17-year-old otherwise healthy girl, who, after an attack of polyarthritis, suffered great pain and swelling in the left hip-joint. A puncture undertaken with antiseptic precautions gave exit to some one hundred centimetres (three ounces) of a bloody fluid. The whole limb was put up in a plaster-of-Paris bandage, pain ceased at once, and a cure was effected within a few weeks. X.

Orthopædic Treatment in Paralysis of Ocular Muscles.—J. Michel (*Cbl. f.*

Med., 1878, p. 286; from *Klin. Monatsbl. f. Augenheilk.*) recommends in these cases a local treatment based upon the principle of passive movement. After fixation of the bulbus in the neighborhood of the corneal border, beside the insertion of the paralyzed muscle, the former is to be moved backward and forward through the longest arc possible. This passive motion is to be kept up for the space of about two minutes, and should be practised once a day. The advantages of the treatment are, elimination of the action of the antagonistic muscles, and shorter duration of the treatment. x.

Persistent Hiccough treated successfully by Pilocarpine.—Dr. Ortille, of Lille, writes to the *Bull. Gén. de Thérap.*, 1878, p. 412) giving an account of a case of obstinate hiccough in which, after trying all the usual remedies, he had recourse to electricity, which was found so successful by Dr. Dumontpallier. For a few hours the electrical applications appeared to prove successful; but the hiccough returned. Dr. O. was about to apply electro-puncture, with a view of tetanizing the diaphragm, when, recollecting what he had read of the action of pilocarpine upon the phrenic nerves and of the vomiting which so often follows its use, he injected two and one-half centigrammes (two-fifths of a grain) of pilocarpine under the skin. The effect was surprising and almost instantaneous. A quarter of an hour after the injection the patient was covered with sweat, salivation was established, and the hiccough had ceased, not again to recur. x.

Iodide of Potassium in Asthma.—In our issue for May 25, 1878, will be found a brief account of Sée's method of treating asthma. Winternitz (*Wien. Med. Presse*, 1878, No. 19) has employed this treatment in one case with success. The patient, a man of 50, had suffered twenty years from asthma, always annoying, and aggravated so greatly by catching cold that he had to spend his winters in the South. He was strumous, having enlarged glands about the neck. Following a cold contracted during March last, he had decided fever, his lips became cyanotic, pulse 90, and he showed all the symptoms of embarrassed respiration and circulation. Under these circumstances, W., having failed to relieve his patient by other remedies, ordered him iodide of potassium, at first in the dose of eight grains bis die, then after a few days increasing this to twelve, then to sixteen grains, and finally at the end of ten days to twenty-two grains morning and evening. From this time the dose was gradually diminished. The effect upon the asthmatic symptoms was very marked, the patient soon began to get better, and at the end of two weeks was entirely relieved, and in some respects fully better than he had been for many years. There was no catarrhal trouble from the iodide, and only slight eruption, but the stomach was somewhat disordered. x.

Borax and Boracic Acid as Antiseptics.—Polli, of Milan (*Jour. des Sci. Méd.*, 1878, p. 265), calls attention in a recently published pamphlet to the virtues of borate of sodium in preventing fermentation, particularly comparing these with the sulphites and hyposulphites. He concludes: 1. That boracic acid and borate of sodium do not alter when exposed to the air, like the aqueous solutions of the sulphites. 2. That boracic acid and the alkaline borates do not absorb oxygen and become deoxidizers, like the sulphites and hyposulphites. 3. That the alkaline borates are not decomposed by weak acids, while the mixture of these with the sulphites and hyposulphites is impracticable. 4. Borate of sodium and boracic acid are not purgative, but rather diuretic, in their action: they may therefore, unlike the sulphites and hyposulphites, be administered in considerable doses without fear of exciting intestinal disturbance. 5. Borate of sodium can be given in solution in water, while boracic acid, being nearly insoluble, may be administered in tablets or in suspension in syrup. 6. The price of boracic acid and the borates being much lower than that of the sulphites and hyposulphites suggests the employment of the former in hospital practice when antiseptic effect is desired. x.

Phlegmasia Alba Dolens of the Upper Extremity.—A woman of 26, and in poor health, anæmic and puffy in the face, became pregnant. Her health during pregnancy was better than formerly. She had a good delivery, but the infant died of convulsions at the end of six days. The mammary secretion was suppressed without difficulty, but three weeks later tumefaction of the right arm, with pain and tenderness, occurred. The skin was white and tense, and did not pit upon pressure. Blue

striæ and indurated ridges were observed, particularly at the bend of the elbow. The swelling had begun at the hand and had extended rapidly up to the shoulder. Compression was made by means of a bandage, and this œdema disappeared within twenty-four hours. At the end of six days, however, it had again recurred, and this time extended beyond the arm, involving the upper part of the chest, neck, and face, particularly upon the right side. The voice became altered, the respiration thick and guttural, no pulmonary complications. Under the use of liniments these symptoms disappeared, afterwards showing themselves on the left side, but finally disappearing entirely.—*La France Méd.*, 1878, p. 91; from *Lo Sperimentale.* x.

Falsification of Lycopodium.—M. Stanislas Martin, the well-known pharmaceutist of Paris, gives a short note on the admixture of dextrine with the lycopodium of commerce, of which the following is the substance. Viewed with the naked eye, adulterated lycopodium cannot be distinguished from the pure article. Under the microscope, however, the powdered lycopodium is seen to consist of isolated granules spherical in shape and fissured in three planes. Dextrine, on the other hand, appears in the form of flat shining lamellæ. Shaken up with water, the dextrine dissolves out of the mixture, while the lycopodium remains insoluble. This solution of dextrine can be evaporated over a water-bath and dried. It is then in the form of a yellow powder like pulverized corn starch. A solution in water deflects polarized light.

Lycopodium powder, which when pure is an admirable application in those chafes so common in fat children, becomes a very disagreeable sticky mass when mixed with dextrine and applied to a moist surface. It is therefore desirable that it should be pure.—*Bull. Gén. de Thérap.*, 1878, p. 410. x.

Pure Urea in the Blood does not cause Convulsions.—MM. Feltz and Ritter (*Bull. Gén. de Thérap.*, 1878, p. 416) have presented before the Académie de Sciences a note relative to certain experiments which they have made upon urea as the alleged cause of uræmic convulsions. Their conclusions are as follows: 1. Pure urea, artificial or natural, injected into the venous system in very large amounts never causes convulsive symptoms: it is rapidly eliminated by the secretions. 2. There are no ferments in normal blood which might convert urea into ammoniacal salts; rapidity of elimination cannot be held responsible for this non-conversion, for by suppression of the renal secretion elimination of urea may be retarded without hastening the supervention of eclampsia. 3. Ureas which in large doses give rise to convulsions are always impure, containing ammoniacal salts whose presence may easily be demonstrated by Nessler's reagent. x.

Extraordinary Sexual Precocity.—M. Lefebre (*Jour. des Sci. Méd.*, No. 5, 1878; from *Bull. de l'Acad. Roy. de Méd.*) gives a note on Molitor's case of a girl eight years of age who became pregnant and aborted at four weeks. The case is pretty fully described, and appears to be authentic. x.

Case of Cancer of the Uterus with Coincident Induration of the Left Mammary Gland.—J. Rogowicz (*Cbl. f. Chirurgie*, 1878, No. 18; from *Medycyna*) had a patient 46 years old, very anæmic, and suffering from a carcinomatous tumor, the size of a walnut, in the vaginal portion of the uterus, ulcerated and bleeding. In addition, there was a hard, knotty, citron-sized tumor in the left breast, together with walnut-sized indurated axillary glands. Application of a hot iron to the uterine growth was followed by peritonitis. This was treated by calomel, and salivation ensued. The patient recovered, and when seen, six months later, showed no sign of a tumor in the left mammary region, but a similar one in the right. Rogowicz attributes the disappearance of the mammary tumor to salivation. x.

Tuberculosis of the Muscles.—Marchand (*Cbl. f. Chirurgie*, 1878, No. 18; from *Virchow's Archiv*, Bd. lxxii. p. 142) observed the following appearances in the post-mortem examination of a 24 year-old prisoner who had suffered from coxitis. The muscles in the neighborhood of the diseased bone were filled with numerous roundish bodies, which were for the most part yellow and caseous. Most of these miliary tubercles had developed in the immediate neighborhood of the smaller arteries. In addition, miliary tuberculosis of the lungs, spleen, kidneys, and particularly of the lymphatic glands near the hip, was observed. x.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 20, 1878.

EDITORIAL.

SEPARATE CONFINEMENT.

THIRTY-SIX years ago, after a visit to this city, Charles Dickens wrote of the system of separate confinement practised in the Eastern State Penitentiary that although in intention it was "kind, humane, and meant for reformation," yet in its effect it was "cruel and wrong," and added, "There is surely more than sufficient reason for abandoning a mode of punishment attended by so little hope or promise and fraught beyond dispute with such a host of evils." In these opinions, even at that time, he was not by any means alone; and since then the same forcible statements have been repeatedly reiterated and the beneficial results of the system have been as frequently denied. During this time, however, the system has been in operation in our midst, attracting but little attention from the intelligent few, misunderstood and misrepresented by the ignorant many, bitterly opposed by the advocates of other methods of punishment, and yet, under the intelligent and persevering administration of a few public-spirited gentlemen, slowly but surely demonstrating its excellence and the wisdom of its original projectors. The principal and distinctive characteristic — the *separate* confinement of convicts, as opposed to their congregation in large masses—is still adhered to as closely as the occasional overcrowding of the prison will permit, and with results which, so far as we know, are unsurpassed, if not unequalled, by those of any similar institution in this country or elsewhere. The evils which it has been asserted are necessarily attached to this plan are the production of insanity, the occurrence of pulmonary disease, the prevalence of the habit of masturbation, and the non-productiveness of convict labor. To all these assertions the annual reports of the prison have given frequent and conclusive contradiction; and that for 1877, which we have just received, forms no exception to this rule. We have space to allude only to a few of the facts bearing directly upon these points, which, however, from their relation to the general etiology of mental and physical disease, ought to be of sufficient interest to medical men to entitle them to careful consideration.

In a population of over fifteen hundred, only two men developed insanity, and one of these was a man imprisoned for incestuous fornication attended with the most aggravated and disgusting circumstances,—that is, a man of whom, according to the now unquestioned laws of correlation between crime and insanity, mental aberration might have been, and indeed was, long ago predicted. Only nine deaths occurred from phthisis during the year; and in all of these there was either actual pulmonary disease or marked hereditary tendency towards such disease at the time of admission. In regard to the prevalence of masturbation, it is shown beyond a doubt that it does not exist in the prison to any greater degree than among the general community. The entire mortality for the year was only 1.03 per cent.,—less than that among the inhabitants of a section of the avenue upon which the prison is situated, and directly fronting it.

No case of typhoid fever occurred during the year,—a convincing evidence of the perfect drainage and ventilation of the cells and the general cleanliness of the prison.

Upon the question of the greater pecuniary profit to be derived from the congregate system of imprisonment it is not necessary to enter. As long as it is recognized that there are other requisites in the treatment of criminals than those of

labor and incarceration,—as long as it is shown, as it clearly is here in the admirable report of the president of the board of inspectors, that the age and circumstances of many of the prisoners indicate that they do not belong to the crime-class, and that in many instances their criminal tendencies are in the first stage of development and are probably curable,—just so long will the amount of profit to be derived from their labor remain a secondary question. That of primary importance to society and to the convict himself is how to prevent the association of such persons with hardened and confirmed criminals, and at the same time to subject them to such reformatory forces as are best adapted to their particular needs. Congregate prisons certainly do not afford these advantages, and are here well defined as "manufactories where incarceration is the punishment and labor the penalty, and where moral instruction and school-keeping are recreations granted to the convicts to occupy an hour or two in which work cannot be profitably carried on."

As a field of psychological study for the alienist or medical jurist, probably no other institution in the country offers equal advantages. The tables with which its reports are filled, showing the relation of crime to disease, the influence of hereditary tendencies in the production of criminals, the closely interwoven relations between physical and mental trouble and again between these and moral aberration, form one of the most valuable collections of statistics that could be put in the hands of any physician who has to deal with these problems. They are certainly too little known and appreciated by the profession, and we take this means of calling attention to them because honest and persevering labor such as has been manifested for many years in the management of this prison, under adverse circumstances and in the face of bitter opposition, is at least worthy of the recognition and criticism of intelligent men, if not also of their support and encouragement.

BUFFALO LITHIA SPRINGS.

THE value of alkalies in disease has long been known, and the wide reputation of the springs of Vichy bears testimony to the superiority of the natural waters over the simple alkalies. Of late years lithia has been asserted to have especial value in chronic gout over and above that of other alkalies. Some considerable experience has indicated that this assertion is well founded; and several years since we looked for a native lithia water which should be cheap and efficient. The product of the Buffalo springs of Mecklenburg County, Va., was finally brought to our notice by a Baltimore physician, who had been relieved by its use of some very troublesome and alarming symptoms believed to be due to an inherited gouty diathesis. Trial in one or two cases of inveterate chronic gout has afforded much satisfaction to us, free diuresis being provoked and followed by relief of symptoms. It is too early to decide whether the water will assume the position of an achieved, substantial reputation; but certainly we are acquainted with no little-known spring that seems to come with so much of promise, and we trust that some of our readers will give a speedy and impartial trial and report the results in our columns.

CORRESPONDENCE.

CHLORAL IN DYSENTERY.

Millville, N.J., June 25, 1878.

Prof. H. C. Wood:

My dear Doctor,—An invasion of dysentery in our midst reminds me of a conversation with you some time since, wherein I promised to write you the details of my manner of treating that disease with hydrated chloral injections.

A weak solution of that valuable medicine on chronic ulcers manifested such favorable results in my hands that I conceived the idea

of using it locally on the inflamed and congested bowel in dysentery. The first case had been under the usual treatment for three days without relief. The child, aged 11, was tormented with thirst, pain, and tenesmus, with twenty-five or thirty dejections in twenty-four hours. In connection with other treatment I ordered five grains of chlor. hyd. dissolved in ℥ij starch gruel thrown up the bowel with considerable force from a hard rubber syringe. It remained three hours, during which the child slept. Many of the other symptoms were modified, and the injection was repeated, which remained seven hours, when it came away with some fecal matter, but without tenesmus.

The child asked for food, which was given in form of mutton tea thickened with boiled wheat flour. All treatment ceased in forty-eight hours from first enema, four being given in all.

The case seemed so satisfactory that I mentioned it to my confrère Dr. J. S. Whitaker, who has pursued the same treatment with the most happy results in every case, aborting the disease within a few hours.

I may mention that he used ten grains instead of five with a lady aged 25, who had twenty or thirty calls in twenty-four hours, with complete repose for eight consecutive hours, with permanent abatement of all other symptoms, without other treatment. The number of aggravated cases of dysentery we have treated with the chloral hyd. warrants us in the assertion that if early and properly used it is *almost* a specific.

Very truly and courteously yours,
WILLIAM L. NEWELL.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 28, 1878.

THE PRESIDENT, Dr. H. LENOX HODGE, in the chair.

Tumor over the superior maxilla. Presented by Dr. HARRISON ALLEN.

MISS A., aged 24, noticed, in September, 1877, a pimple over the superior canine tooth. Soon afterwards she noticed swelling of the face of the same side. When first seen, through Dr. Sinkler, the swelling was rounded, sessile, one-quarter of an inch long, situated at the junction of the lip and gum, on the right side of the frænum, and extending thence across the frænum. A small fistule was seen on a teat-like eminence, which, however, did not receive anything larger than an Anel's probe. The parts were freely excised, hoping to come upon the sac of an alveolar abscess. No such structure became apparent, the parts cutting like cartilage. Inasmuch as the parts continued to increase in size, the growth was removed under ether, February 17, 1878, Drs. Sinkler, Keen, and Cryer assisting. The swelling in part had returned by March 16, the patient complaining of a pain as though the parts were occasionally stung by a bee.

Report of the Committee on Morbid Growths.—"A microscopical examination of the specimen presented by Dr. Allen shows it to consist of a dense fibrillar connective tissue, infiltrated with numerous small round lymphoid cells. Most probably the growth is the result of an inflammatory process.

"April 11, 1878."

Fibroid polypus of the uterus. Presented by Dr. FREDERICK P. HENRY.

Mrs. K., æt. 48, first came under my observation at the Episcopal Hospital in January, 1877. Her only complaint was of pain in the back. She was questioned regarding uterine symptoms, but her answers were such as to lead to the opinion that the uterus and its appendages were in a normal condition: at any rate, she was not subjected to a uterine examination. The woman's appearance indicated an excellent state of health. Very shortly after her admission she was attacked with rheumatoid arthritis of the finger-joints, which confirmed the opinion that the pain in the back was of a rheumatic nature. The rheumatoid arthritis ran a rather acute course for that disease, and at its termination she was discharged at her own request, the pain in the back being somewhat relieved.

I did not see the woman again until September last. She did not come to me then for treatment, but mentioned incidentally that her backache continued and was rather worse; she was at that time under the treatment of another physician. I did not see her again until March 13, when she came and told me she had decided to place herself under my care. I advised a uterine examination, as on questioning her closely I found that there had been almost constant bloody discharges from the uterus for nearly two years. She preferred first trying medical treatment. In about ten days, the medicine proving of no avail, she agreed to the examination. I discovered a tumor presenting in the cervix, and advised its immediate removal. This was on Friday, March 22. On the following Monday, with the assistance of Dr. Nancrede, I removed the growth with the wire écraseur. There was some slight hemorrhage, which was controlled by the application of Monsel's solution. The operation was performed without an anæsthetic. The woman's condition is now wonderfully improved. All uterine discharge has ceased. The pain in the back has gone, and food, formerly loathed, is now taken with a vigorous appetite.

The removal of these growths is not solely indicated by the symptoms, which are not

always so distressing as in the present case, but also by the possibility of a malignant sarcomatous degeneration occurring in them. In this degeneration the pedicle is often the last portion attacked, so that removal of sarcomatous polypi is frequently followed by a radical cure.

Scirrhus cancer of the pylorus. Presented by Dr. WILLIAM H. WARDER.

Miss Amelia P., aged 35 years, was always remarkably healthy until March, 1877, when she began to suffer from attacks of indigestion. These attacks, which were supposed to be the result of some error in diet, grew worse and more frequent, until there was a constant uncomfortable feeling in the stomach. Domestic, homœopathic, and patent medicines were tried without benefit until July, when she consulted Dr. Conner, who has kindly given me her symptoms at that time and during his attendance. There was languor and debility, sleepiness, uneasiness in the epigastric region, especially after eating; vomiting also occurred occasionally a few hours after meals, of undigested or partly digested food and mucus. The patient was somewhat anæmic. Bowels constipated; tongue moist, but slightly coated in the centre. From this time until December there was no marked change. She was alternately better and worse. Now she began to complain of sour stomach, acid and watery eructations, and heart-burn. Anæmia and debility becoming more decidedly marked; countenance cachectic; bowels constipated. The distress in the stomach was of a gnawing character, and described as a "misery." She never admitted having pain of a sharp lancinating character. At this time there was some tenderness in the lower part of the right epigastrium, which was entirely relieved by a blister. Strict attention had been paid to the diet. Oleaginous substances, pure cream, cod-liver oil, essence of beef, were acceptable to the stomach, and produced only a minimum of gastric uneasiness. Saccharine or starchy food always produced a great deal of distress. Cod-liver oil taken in September improved her condition, and she gained about three pounds in flesh. December 13, passed a restless night, and early on the morning of the 14th vomited about one quart of a dark fluid having a sooty or coffee-grounds appearance; also a small quantity in the afternoon. This was the only time this kind of vomiting occurred during her illness. The stools the day following were much darker than usual, and the breath for eight or ten days subsequently was fetid.

Immediately preceding this black vomiting the patient complained of intense burning in the stomach, remarking that it felt like a coal of fire. This pain disappeared after the vomiting, and did not return. Dr. Conner pronounced the case cancer of the pylorus.

I saw the patient on February 13. She was very much emaciated and suffering from great debility; countenance cachectic. Did not complain of any pain in the stomach. No nausea or vomiting. No pain upon pressure over any part of the abdominal walls. She was able to take one and a half to two pints of milk per day, and the essence of a pound of beef, without inconvenience. Did not complain of any pain after eating. She complained only of weakness.

There was no tumor of any kind in the epigastric region. Upon a very careful examination, I found a very small, hard nodule, about the size of a walnut, on a line with the umbilicus, and about one inch and a half from it. This could be handled without giving the patient pain, but did not seem to be very movable. It appeared to be in the region of the head of the pancreas. The bowels were loose and inclined to diarrhœa. The urine was normal in quantity and quality. The temperature 99° to 99½° in the axilla.

Dr. William Pepper saw the case with me on the 7th of March, and after a careful examination was disposed to think the disease cancer of the head of the pancreas. The character of the symptoms negatived the idea of any considerable degree of pyloric obstruction, though from the occasional attacks of marked gastric disturbance which had occurred at an earlier period of the case, it seemed not improbable that the diseased mass was attached to or partly involved the walls of the stomach. There were no especial symptoms of any kind after this. She simply complained of weakness, and died on the 16th of March.

Post-mortem.—Stomach very much distended, with about one quart of dark, sooty fluid in it. The pyloric portion was on a line with the umbilicus, and about one and a half inches to its right. The fundus or larger tuberosity was resting on the upper portion of the left iliac region. It was healthy, except at the pyloric orifice, where there was a hard nodular mass. Upon opening the stomach there was found an ulcerating surface corresponding to the hard indurated mass. No glandular involvement; liver normal; also pancreas and spleen.

Dr. PEPPER said he had seen the case once in consultation with Dr. Warder, and it seemed to him to present much interest, both clinical and pathological. It was a good illustration of the difficulty that often attends the diagnosis of diseases of those organs whose functions are not well known or are with difficulty investigated during life. In the present case the progress of the symptoms made it clear that malignant disease existed, and careful examination revealed the presence of a small ovoid tumor in the position described by Dr. Warder, a little to the right of the median line and about one inch above the line of the umbilicus. The diagnosis chiefly rested between pyloric or pancreatic scirrhus. It must be remembered that at no time had there been

symptoms of pyloric obstruction. Vomiting had occurred several times in the course of a few months, and some kinds of food caused distress; but as a rule the patient was able to take and digest a fair amount of nutritious food. In some cases of pyloric cancer symptoms of obstruction, distention of stomach, vomiting, constipation, disappear late in the course of the disease, owing to the occurrence of ulceration; but here no such symptoms occurred at any time. It is true that at the post-mortem the stomach was found markedly enlarged; but this could not be detected when I saw the patient. The belly was retracted, and there was dulness on percussion everywhere, save just below the ribs. This was due to the fact that the intestines contained little gas, while the stomach contained scarcely any, the only contents being a considerable quantity of grumous fluid which gravitated to the greater curvature. The tumor was unusually low down for pyloric scirrhus; and it also seemed less movable and more closely attached to the vertebral column than is usual with such growths. The above points seemed certainly in favor of the seat of disease being the head of the pancreas. Considering the quantity of food taken and retained, and the absence of fever or severe pain or any wasting discharge, the emaciation was rather remarkable. It could not be said that there was any unusual proportion of fat in the stools; and the patient was too ill to justify the administration of oil with the view of ascertaining the power of digesting fat. On the other hand, various symptoms met with in a large proportion of cases of pancreatic cancer were absent. Among these may be mentioned pain in the back, and jaundice. Upon the whole, however, it seemed most probable that the scirrhus nodule was seated in the head of the pancreas, and that the pyloric end of the stomach was closely adherent or even involved. It has been seen, however, that this view was not confirmed by the post-mortem examination; although even now it seems difficult to see how a different opinion could have been formed. It is finally interesting to note that, although symptoms of pyloric obstruction were absent, there is a certain degree of contraction of that orifice. Thus, the little finger can be passed through it only a little beyond the first joint.

GLEANINGS FROM EXCHANGES.

The Rational Treatment of Stricture of the Urethra (*The Medical Record*, June 15, 1878).—In a paper on this subject read before the New York Medical Journal Association, Dr. S. W. Gross comes to the following conclusions:

1. The rational treatment of stricture of the urethra consists in restoring the natural expansibility or calibre of the affected portion of the canal.

2. Before any operation having this end in view is practised, the sensibility of the urethra should be obtunded, lest it resent the violence to which it is about to be subjected.

3. After the spasm and hyperæsthesia have been relieved, the calibre of that portion of the urethra in which the stricture is located should be estimated by the urethrometer, with the view of bringing the affected portion up to that standard.

4. Internal urethrotomy from behind forward is the most effectual mode of accomplishing that object.

5. The meatus should not be interfered with provided its circumference is eight millimetres less than that of the spongy urethra.

The Excretory Process (*The Clinic*, June 15, 1878).—Of the collective material present in the digestive apparatus of animals, only a portion is altered chemically and by fermentation so that it is entirely or in part assimilated. The remaining portions are not changed in the organism, but leave in their original forms after they have produced certain effects in the body. The organs through which they leave the body depend on the diffusibility of the materials. Materials but little diffusible pass through the intestinal canal only; those readily diffusible pass through the intestinal walls into the fluids of the body, and into the blood; thence they are excreted by the glands. The more diffusible the material, the greater the number of glands which take part in the excretion. In order to discover all the organs which excrete such substances, Dr. Albert Adamkiewicz examined the ways of secretion of one of the most diffusible salts, *i.e.*, the iodide of potash. He found it in the urine, saliva, tears, milk of nursing women, sweat, secretions of the nose, and in a case of well-developed iodine acne in the contents of the pustules. In the latter the presence of the iodine was shown with some difficulty; in the other secretions with ease. The proof of the presence of the iodine in the pus of inflamed sebaceous glands was obtained after considerably diluting the nitric acid used for the iodine reaction. From the presence of the iodide of potassium in the contents of the acne pustule, he concludes that the sebaceous glands also secrete iodine, and that the salt excreted by these glands inflamed them and thus caused the acne.

Urethrotomy for Impacted Calculus (*The Indian Medical Gazette*, May 1, 1878).—Surgeon R. D. Murray reports the case of a man, æt. 40, who when he came under notice was suffering from great difficulty in micturition, severe pain along the entire urinary tract, and much constitutional prostration. The urine was passed in drops, and the bladder was distended and the seat of intense pain. His conjunctivæ were jaundiced and blood-shot. On examination a calculus was

found impacted in the penis just where it emerges from the scrotum, large in size and almost completely obstructing the passage of urine. Efforts were made to dislodge it, but it could not be moved. An incision three-quarters of an inch in length was then made, and the stone extracted. The edges of the cut were carefully brought together with cat-gut sutures, and a catheter was left in the bladder for forty-eight hours. In about nineteen days the patient was discharged, with the wound entirely healed. As it is usually taught that these operations are commonly followed by urethral fistulæ, and that therefore the calculus should be, if possible, extracted through the perineum, the case seems worthy of record.

Vaseline as a Base for Eye-Salves (*The Clinic*, June 15, 1878).—Dr. Galezowski speaks of the great advance in the treatment of scrofulous affections of the eye, chiefly keratitis and conjunctivitis, by the use of the yellow oxide of mercury. The preparation is almost a specific in phlyctenular keratitis and phlyctenular kerato-conjunctivitis.

In order that the salve shall be the most efficacious, it must be as little irritating as possible. Vaseline he regards as the most suitable preparation as a vehicle. It is free from acids, and is unalterable,—properties not possessed by any of the fats. He says his trials with the vaseline have far surpassed his expectations, and ends with giving two formulæ that he uses, the one of the yellow oxide of mercury and vaseline for scrofulous phlyctenular keratitis, the other of nitrate of silver and vaseline for granular conjunctivitis.

MISCELLANY.

The Cæsarean Section in a Theological Aspect.—A medico-theological question has been lately agitated in the French journals in reference to children extracted by the Cæsarean operation. The performance of the rite of baptism has been hitherto restricted to those children that have presented any signs of life after removal from the body of the woman. This is also the rule in England. In France the operation appears to have been recently performed as much for the purpose of procuring a subject for baptism as for the saving of the life of the child. Judging by a case which is recorded to have occurred at Champoly, the life of the woman is of secondary importance under these circumstances. A woman named Dumas is said to have died from the Cæsarean operation, performed on her by a pork-butcher, under the direction of a priest. There was an inquiry, but it came to nothing. The reclamations of the press and the remonstrances of the profession have had no effect. The sole object of the priest was to have the child removed by extraction, in order that the rite of baptism might be performed on it; and he doubtless selected a non-professional operator from the difficulty of finding a member of the medical profession to assist him in his views. Dr. Depaul, an eminent obstetric surgeon, in commenting upon the facts of the case, truly states that the conduct of both persons was illegal. In dealing with the theological question, Dr. Depaul makes a few observations which may be of use to medical practitioners on these occasions. A medical man must not surrender his judgment for the performance of this operation to the dictation of a priest or any other person. If he perform the Cæsarean section, he must perform it on his own responsibility and on reasonable grounds, such as would be sanctioned by professional practice. It is a delicate question whether it should in any case be performed on a living woman, as it might accelerate her death. If performed in advanced pregnancy, within a quarter of an hour after death, the child may be equally removed living. The safety of the woman should in these cases predominate over all other considerations. The operation may cause the immediate death of a woman, and this act of vivisection would not be justifiable merely for the sake of baptizing a child which might die immediately after its extraction from the uterus. In France it is much more common to operate on a living woman than in England; but the English law, which allows a husband to inherit the property of his wife, renders it a necessary condition that the child must be born or extracted while the woman is living. Hence it is to the interest of the English husband to have the child extracted from the wife before her death. Medical men have nothing to do with the theological questions connected with this subject. They are of greater importance in Roman Catholic than in Protestant countries. The text of the law in France is that a child can only be baptized after its birth, and the moment of its birth is indicated by its appearance in the light of day, whether this appearance be the result of natural or violent causes,—*i.e.*, by delivery or the Cæsarean extraction. Theologians do not admit that baptism can be performed on the child in utero through the abdomen of the mother; and it is a moot point whether, in partial delivery, it can be performed unless the head of the child is presenting. The Academy of Medicine have had this subject under discussion, but they have come to no formal resolution. They discourage the performance of the operation on living women; and even in reference to the dead they advise that it should not be performed unless the child is viable, or unless it has reached such a stage of gestation as to enable it to live after its extraction.—*British Medical Journal.*

Hydrophobia and Sexual Excitement.—As to the experimental production of rabies,—its generation *de novo*,—experimental vet-

erinary science, and the pathological observations of competent veterinarians in Europe, furnish some facts worth recording. Fleming reports the case of a cross-bred spaniel, five and a half months old, which had never left its mother, never went out, and was naturally very quiet. When the mother became in rut, the young dog, excited by the odor, became extremely agitated, and at last refused food. Three days later, being asleep, it wakened suddenly, and flew savagely at an attendant. When taken to the infirmary of an eminent veterinary surgeon in Paris, rabies was diagnosed. The animal refused all food for the next three days; on the fourth, rabietic paralysis supervened; on the fifth, it died. Another case of what Fleming styles spontaneous rabies, occurring under similar conditions, is noted in a late number of the *Veterinary Journal*, London. In a box adjoining the kennel of a male was placed a female in rut, the effluvia from which caused the most ardent veneric excitation. For fifteen days—placed in such tantalizing proximity—the unfortunate animal manifested the most extreme agitation, and finally went furiously mad. Similar results have been produced experimentally by confining males near a female in rut, particularly by M. Toppolin, who describes them as so constant and decisive as to leave no room for doubt as to the agency of intense sexual or other excitation in producing rabietic madness. It is not an unfamiliar fact that rabies has been experimentally produced in the inferior animals by inoculating them with man's saliva, as well as with the saliva of dogs not rabid. A guinea-pig thus inoculated became subject to violent convulsions, which could be excited at pleasure by dashing a little water at him. A rabietic pig, which lay torpid under the severest beating, could be excited to convulsions at pleasure by flirting a piece of white paper in its face.—*New York Medical Record.*

Horse-Shoes.—The *London Lancet* avers that from a physiological point of view nothing can be more indefensible than the use of horse-shoes. The mode of attaching them by nails it believes to be injurious to the hoof, and the probable cause of many affections of the foot and leg which impair the usefulness and must affect the comfort of the animal. It thinks that it would be found that the natural structure would adapt itself to any ordinary requirement. There is, however, a wide difference of opinion upon this point among authorities on horse management, and the problem is not likely to be finally solved until the experiment has been tried. There can be no doubt as to the additional power of *grasping* road-surfaces which would be secured, to the advantage of the rider or driver and the relief of the horse, if shoes were not used. The experiment, to be at all a fair one, must be tried with colts that have never been shod.

Milk.—To convert, so to speak, cow's milk into human milk, allow one-third of a pint of new milk to stand for about twelve hours; remove the cream and add it to two-thirds of a pint of new milk, as fresh from the cow as possible. Into the one-third of a pint of blue milk left after abstraction of the cream, put a piece of rennet one inch square. Let the vessel stand in warm water till the milk is fully curdled, which requires from five to fifteen minutes, the rennet being removed as soon as the milk curdles, and put into an egg-cup for future use, as it can be employed daily for a month or two. Break up the curd thoroughly, and separate the whole of the whey, which should be rapidly heated to boiling, when a little more casein separates and may be removed by straining. One hundred and ten grains of powdered sugar of milk are to be dissolved in this hot whey, and the sweetened fluid added to two-thirds of a pint of new milk.—*Canadian Journal of Medical Science.*

It is stated that Prof. Virchow has determined to withdraw from politics.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 30 TO JULY 13, 1878.

Smith, A. K., Major and Surgeon.—To report to Superintendent-General Recruiting Service for duty at the General Recruiting Depot, David's Island, N. Y. H. S. O. 143, A. G. O., July 3, 1878.

Middleton, P., Captain and Assistant-Surgeon.—Assigned to duty as Post-Surgeon at Fort Porter, N.Y. S. O. 120, Department of the East, July 13, 1878.

Taylor, M. K., Captain and Assistant-Surgeon.—Leave of absence extended four months. S. O. 142, A. G. O., July 2, 1878.

Pope, B. F., Captain and Assistant-Surgeon.—Assigned to duty as Post-Surgeon at Fort Schuyler, N. Y. H. S. O. 116, Department of the East, July 8, 1878.

Kimball, J. P., Captain and Assistant-Surgeon.—To report to Comd'g General Dept. of the East for duty as Attending Surgeon at Governor's Island, N. Y. H. S. O. 143, c. s., A. G. O.

Campbell, A. B., Captain and Assistant-Surgeon.—Granted leave of absence for two months. S. O. 130, A. G. O., June 28, 1878.

Patzki, J. H., Captain and Assistant-Surgeon.—Assigned to duty as Post-Surgeon at Fort Ontario, N.Y. S. O. 120, c. s., Department of the East.

Ainsworth, F. C., First-Lieutenant and Assistant-Surgeon.—Relieved from duty in Department of Arizona, and assigned to duty in Department of California. S. O. 142, c. s., A. G. O.

Skinner, J. O., First-Lieutenant and Assistant-Surgeon.—Assigned to duty as Post-Surgeon at Camp Bowie, A. T. S. O. 66, Department of Arizona, June 19, 1878.

Taylor, M. E., First-Lieutenant and Assistant-Surgeon.—Assigned to duty as Post-Surgeon at Fort Bliss, Tex. S. O. 53, District of New Mexico, June 21, 1878.

Rosson, R. L., First-Lieutenant and Assistant-Surgeon.—Assigned to duty as Post-Surgeon at Fort Yuma, Col. S. O. 66, c. s., Department of Arizona.

La Garde, L. A., First-Lieutenant and Assistant-Surgeon.—Assigned to duty at Fort Hamilton, N. Y. H. S. O. 116, c. s., Department of the East.

Reynolds, F., Captain and Assistant-Surgeon.—Retired from active service in conformity with Sec. 1251, Revised Statutes. S. O. 139, c. s., A. G. O.

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